

WHAT IS CLAIMED IS:

1. A putter head comprising:

a toe portion;

a heel portion;

a generally vertically extending wall, the wall having a front strike face,

5 a rear surface, an upper layer, and a lower layer, the upper layer, the lower layer and

6 the rear portion each extending from the heel portion to the toe portion to define a

7 recess rearwardly extending into the wall from the strike face, the rear portion of the

8 wall being formed with variable thickness thereby providing the recess with a variable

9 rearward depth; and

10 an insert substantially filling the recess and connected to the wall, the

11 insert having a front surface, a top surface, a bottom surface and a rear surface, the

12 front surface being exposed, the top and bottom surfaces being substantially covered by

13 the wall.

2. The putter head of claim 1, further comprising a sole portion rearwardly

2 extending from a lower region of the wall, and wherein the sole portion has an upper

3 surface, and wherein the upper surface has a sight line positioned substantially

4 perpendicular to the strike face.

3. The putter head of claim 1, further comprising

2 extending from a lower region of the wall, and wherein the sole portion has an elongate

3 sole slot disposed rearward of the insert and generally parallel to the strike face.

4. The putter head of claim 1, wherein the wall includes an upper rear edge

2 generally extending from the heel portion to the toe portion, and wherein the upper rear

3 edge is substantially parallel with the strike face to provide a top alignment line.

1       5.    The putter head of claim 1, wherein the insert is a lightweight material  
2   selected from the group consisting of a urethane, an epoxy resin, a thermoplastic, a  
3   thermoset material, an elastomer, and combinations thereof.

1       6.    The putter head of claim 1, wherein the insert is made of a translucent  
2   material.

1       7.    The putter head of claim 1, wherein the insert is formed in a shape  
2   selected from the group consisting of trapezoidal, triangular, polygonal, semi-circular,  
3   semi-elliptical, and combinations thereof.

1       8.    The putter head of claim 1, wherein the recess is defined in a central  
2   region of the strike face, and wherein the exposed front surface of the insert is  
3   substantially coplanar the strike face.

1       9.    The putter head of claim 1, wherein the recess extends substantially  
2   across the entire width of the strike face.

1       10.   The putter head of claim 1, wherein the insert is castably formed to the  
2   wall without the use of an adhesive.

1       11.   The putter head of claim 1, wherein the strike surface has an intended  
2   strike region, and wherein the exposed front surface extends across the intended strike  
3   region of the strike face.

1       12.   The putter head of claim 1, wherein the insert is formed of a material  
2   having a durometer of between 40 and 65 on a Shore A hardness scale.

1       13.   The putter head of claim 1, wherein the insert is formed of a material  
2   having a durometer of between 45 and 55 on a Shore A hardness scale.

1        14. The putter head of claim 1, wherein the insert includes a center portion,  
2        a toe end portion and a heel end portion, wherein the center, toe and heel portions of  
3        the insert have first, second and third rearward depths, respectively, wherein the first  
4        rearward depth is greater than either of the second and third rearward depths.

Sub B3

1        15. A putter head comprising:  
2        a generally vertically extending wall having a front strike face and a rear  
3        surface, the wall having an insert region at the strike face defining a rearwardly  
4        extending recess of varying rearward depth; and  
5        a single insert castably formed in the recess of the insert region, the  
6        insert having a variable rearward depth to substantially fill the recess, the insert  
7        contacting the insert region of the wall.

Sub B1  
TOE REED

1        16. The putter head of claim 15, further comprising a sole portion  
2        rearwardly extending from a lower region of the wall, and wherein the sole portion has  
3        an upper surface, and wherein the upper surface has a sight line positioned substantially  
4        perpendicular to the strike face.

Sub B4

1        17. The putter head of claim 15, further comprising a sole portion  
2        rearwardly extending from a lower region of the wall, and wherein the sole portion has  
3        an elongate sole slot disposed rearward of the insert and generally parallel to the strike  
4        face.

1        18. The putter head of claim 15, wherein the wall includes an upper rear  
2        edge generally extending from the heel portion to the toe portion, and wherein the  
3        upper rear edge is substantially parallel with the strike face to provide a top alignment  
4        line.

1        19.    The putter head of claim 15, wherein the insert is a lightweight material  
2    selected from the group consisting of a urethane, an epoxy resin, a thermoplastic, a  
3    thermoset material, an elastomer, and combinations thereof.

1        20.    The putter head of claim 15, wherein the insert is made of a translucent  
2    material.

1        21.    The putter head of claim 15, wherein the insert is formed in a shape  
2    selected from the group consisting of trapezoidal, triangular, polygonal, semi-circular,  
3    semi-elliptical, and combinations thereof.

1        22.    The putter head of claim 15, wherein the recess is defined in a central  
2    region of the strike face, and wherein the exposed front surface of the insert extends  
3    across the central region of the strike face.

1        23.    The putter head of claim 15, wherein the recess extends substantially  
2    across the entire width of the strike face, and wherein the exposed front surface of the  
3    insert is generally coplanar with the strike face.

1        24.    The putter head of claim 15, wherein the insert is formed of a material  
2    having a durometer of between 40 and 65 on a Shore A hardness scale.

1        25.    The putter head of claim 15, wherein the insert is formed of a material  
2    having a durometer of between 45 and 55 on a Shore A hardness scale.

1        26.    The putter head of claim 15, wherein the insert includes a center portion,  
2    a toe end portion and a heel end portion, wherein the center, toe and heel portions of  
3    the insert have first, second and third rearward depths, respectively, wherein the first  
4    rearward depth is greater than either the second and third rearward depths.

*Sub 15*    27.    A putter head comprising:

2 a toe portion;  
3 a heel portion;  
4 a generally vertically extending wall extending from the toe portion to  
5 the heel portion, the wall having a front-strike face and a rear surface;  
6 a rearwardly extending recess defined into the strike face of the wall, the  
7 recess having varying rearward depth;  
8 an insert substantially filling the recess and connected to the wall; and  
9 a sole portion rearwardly extending from a lower portion of the wall, the  
10 sole portion having an elongate sole slot, the sole slot disposed rearward of the insert  
11 and substantially parallel to the strike face.

Sub 181  
1 28. The putter head of claim 27, wherein the sole portion has an upper  
2 surface, and wherein the upper surface has a sight line positioned substantially  
3 perpendicular to the strike face.

1 29. The putter head of claim 27, wherein the wall includes an upper rear  
2 edge generally extending from the heel portion to the toe portion, and wherein the  
3 upper rear edge is substantially parallel with the strike face to provide a top alignment  
4 line.

Sub 30  
1 30. The putter head of claim 27, wherein the insert is a lightweight material  
2 selected from the group consisting of a urethane, an epoxy resin, a thermoplastic, a  
3 thermoset material, an elastomer, and combinations thereof.

Sub 31  
1 31. The putter head of claim 27, wherein the insert is formed in a shape  
2 selected from the group consisting of trapezoidal, triangular, polygonal, semi-circular,  
3 semi-elliptical, and combinations thereof.

1        32. The putter head of claim 27, wherein the recess extends substantially  
2 across the entire width of the strike face, and wherein the exposed front surface of the  
3 insert is generally coplanar with the strike face.

1           33. The putter head of claim 27, wherein the insert is castably formed to the  
2 wall without the use of an adhesive.

1           34. The putter head of claim 27, wherein the insert is formed of a material  
2 having a durometer of between 40 and 65 on a Shore A hardness scale.

1           35. The putter head of claim 27, wherein the insert is formed of a material  
2 having a durometer of between 45 and 55 on a Shore A hardness scale.